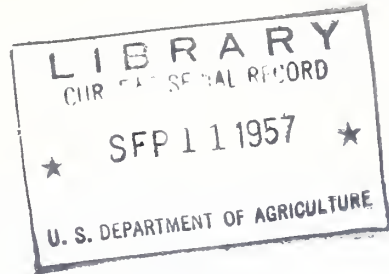


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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service



AMS-207

H O M E M A K E R S A P P R A I S E
CITRUS PRODUCTS, AVOCADOS, DATES, AND RAISINS

A Preliminary Summary Report

Washington, D. C.
September 1957

This study reports on American homemakers' use of and attitudes toward citrus fruits, avocados, dates, and raisins. It is one of a series concerning consumer preferences for farm products conducted by the Market Development Branch, Marketing Research Division. The study was conducted under the general direction of Trienah Meyers.

Technical advice during the development of the study was provided by commodity specialists in the Department and such industry advisors and subject-matter specialists as American National Growers Corporation, Calavo Growers of California, California Raisin Advisory Board, Date Administrative Committee, Florida Avocado and Lime Commission, Florida Citrus Commission, Pure Gold, Incorporated, Sunkist Growers, Inc., Texsun Citrus Exchange, and University of Florida Agricultural Experiment Station.

The data were collected by W. R. Simmons and Associates Research, Inc., of New York, under contract with the United States Department of Agriculture.

H O M E M A K E R S A P P R A I S E
CITRUS PRODUCTS, AVOCADOS, DATES, AND RAISINS

A Preliminary Summary Report

By Esther S. Hochstim, project director
Market Development Branch

This preliminary report of an extensive study delineates some of the major findings relating to homemakers' use of and attitudes toward citrus fruits, fresh and processed, and toward avocados, dates, and raisins. A full, detailed report is being prepared for publication. Since the present publication is being released before final review and analysis, the data are subject to possible revision.

Data are based on 2,572 personal interviews made in March and April 1957 with homemakers throughout the United States. The sample of respondents was selected by area probability techniques to be representative of all households in the Nation.

Citrus Fruits

The citrus products discussed with housewives were fresh oranges, grapefruit, lemons, and limes; frozen concentrated and canned orange, grapefruit, and lemon juice; frozen concentrated orangeade, lemonade, and limeade; and chilled ready-to-serve orange juice (a relatively new citrus product prepared from either fresh or a combination of fresh and reconstituted frozen orange juice). These, of course, do not cover the gamut of citrus fruits and processing forms; they were chosen as being most critical to the marketing problems of the citrus fruit industry.

Use of Citrus Products.--Virtually every household in the United States used one or more fresh citrus fruits in the year preceding the study, and most of them used processed citrus juices or ades in addition. Most widely used were fresh oranges, lemons, and grapefruit; used by fewest households were frozen grapefruit juice concentrate and frozen concentrated limeade.

When homemakers were shown a list of 14 citrus fruits, juices, and ades, and asked which they had used in the past year, 99 percent of them indicated that they had used at least 1; and --

98 percent said they had used some fresh citrus:

94 percent oranges,
89 percent lemons,
81 percent grapefruit,
24 percent limes.

68 percent said they had used frozen concentrated juices:

64 percent frozen orange juice concentrate,
29 percent frozen lemon juice concentrate,
18 percent frozen grapefruit juice concentrate.

67 percent said they had used canned juices:

49 percent canned orange juice,
42 percent canned grapefruit juice,
27 percent canned or bottled lemon juice.

44 percent said they had used frozen concentrated ades:

40 percent frozen concentrated lemonade,
22 percent frozen concentrated orangeade,
17 percent frozen concentrated limeade.

31 percent said they had used ready-to-serve orange juice.

Frequency of Use in the Spring.--During the period of the survey -- early spring of 1957 -- fresh oranges and grapefruit and frozen concentrated orange juice were being used more frequently than any of the other citrus products (table 1).

Among the households using the various products:

68 percent were serving fresh oranges more than once a week,
92 percent were serving them once a month or more.

45 percent were serving grapefruit more than once a week,
87 percent were serving them at least once a month.

48 percent served frozen orange juice concentrate over once a week,
78 percent were serving it once a month or more.

The survey period was "out of season" for some of the products studied: Among the past year's users of frozen concentrated ades, fresh limes, and frozen concentrated lemon juice, from 5 to 8 out of 10 said they were not serving these products at the time. These citrus products appear to be associated more with warm-weather drinks than with early spring.

Attitudes toward Citrus Products.--Though the various citrus products have much in common, they also have some distinctly specialized appeals to the consumer. Table 2, showing the major reasons homemakers gave for using each of the products frequently (once a month or more) in the spring, provides both a profile for each of the products and a comparison among them.

While homemakers gave each of the products credit for healthful qualities--vitamins, ability to prevent or cure illness, appetite stimulation, etc. -- such reasons were far more widely ascribed to fresh oranges and grapefruit than to the other products.

Frequent users praised the taste of each of the products, too, but most particularly that of fresh lemons and limes -- many of them thinking, no doubt, not only of the flavor of the fruit itself but also of the flavor that these fruits impart to other foods. These two fresh fruits and canned or bottled lemon juice also got more credit for versatility than other products did, users saying they could use them in many different ways and in many types of dishes.

Convenience came most readily to mind when homemakers gave reasons for frequent use of the processed fruits. Though many praised them for healthful qualities and for flavor, the largest proportions said that one of the reasons they used these processed juices and ades was that they were easy to prepare, timesaving, convenient to have on hand.

Table 3 presents the negative side -- the major reasons given by homemakers who had not used each of the citrus products in the past year. Here, again, health reasons are important, particularly among the few households which did not use fresh oranges. These nonusers tended to say that family members were subject to ailments which precluded the use of citrus, or that the product was too acid for health.

For each product except fresh oranges, substantial proportions said they did not use the product because they didn't like the taste and, especially with canned grapefruit juice and orange juice, that the juice tasted of the processing or of the can.

Cost was a factor with some nonusers, particularly of fresh oranges, frozen orange juice, and ready-to-serve orange juice; and difficulty of preparation or storage affected use of fresh fruits and of frozen orange and lemon juices.

Fresh versus Processed Orange Juice.--The great majority of homemakers believe that freshly squeezed orange juice is richer in vitamin content than frozen or canned orange juice. All respondents were asked:

"On the average, which orange juice do you think is richest in vitamin content -- home-squeezed, canned, or frozen?"

85 percent said home-squeezed
9 percent said frozen
2 percent said canned
4 percent could not say

However, a good many homemakers believed processed orange juice -- particularly frozen -- comes very close to home-squeezed juice in vitamin content (table 4). Among homemakers who said home-squeezed orange juice was richer than the processed:

Almost 7 in 10 said that, setting home-squeezed orange juice at 100 percent, the vitamin content of frozen orange juice was over 70 percent.

Almost 4 in 10 said that the vitamin content of canned orange juice was over 70 percent that of home-squeezed.

Avocados

Use of Avocados.--Avocados are not widely used in the United States: Only 25 percent of the homemakers said they had used this fruit in the past year, and 13 percent said they had never heard of it. The use of avocados, more than that of any other fruit included in this study, appears to be related to region of the country -- lowest in the North Central States, highest in the West (table 5).

Use of avocados in the past year was reported by:

12 percent of North Central homemakers
16 percent of Northeast homemakers
25 percent of Southern homemakers
60 percent of Western homemakers

About half the families who used avocados used them less than once a month, and about 1 in 10 used them more than once a week. Least frequent use was reported in the North Central region where 3 out of 4 homes that served avocados last year served them less than once a month (table 6).

Attitudes toward Avocados.--Most people use avocados because they like the taste, and they find many ways to describe the taste of avocados. Other widely mentioned reasons include their healthful qualities, their use in salads, the variety they add to menus.

Following are avocado users' major answers to the question: "Would you tell me what you like about using avocados?"

- 63 percent gave taste reasons --
 - 27 percent simply said they liked the taste or flavor
 - 15 percent said the taste is different, distinctive
 - 7 percent said it is mild, mellow, delicate
 - 6 percent said avocados have a rich flavor
 - 5 percent spoke of a nut-like flavor
 - 3 percent called the taste "buttery"
 - 4 percent gave other reasons relating to taste
- 29 percent cited health reasons --
 - 11 percent said avocados are healthful, nourishing
 - 10 percent spoke of their being rich in vitamins
 - 2 percent said they were high in proteins
 - 2 percent said they were rich in oil
 - 2 percent said they were caloric, helpful in weight gain
 - 5 percent gave other health reasons
- 22 percent said avocados are good in salads
- 18 percent said they add variety to the menu
- 8 percent said they add eye appeal
- 8 percent spoke of soft, smooth texture
- 7 percent said avocados are easy to prepare or serve
- 6 percent said they bring out flavor of other foods

Lack of familiarity with avocados is not confined to the 13 percent who said they had never heard of them: In addition, about 4 out of 10 nonusers of avocados (almost 3 out of 10 of all homemakers) said they had never tried avocados, didn't know how to prepare them, etc. Other high-ranking reasons for nonuse included dislike of the taste, dislike of avocados generally, belief that they are too expensive.

When the 62 percent of homemakers who said they had not used avocados in the past year were asked, "How does it happen that you haven't used avocados in the last year?" they gave the following replies (some low-frequency reasons omitted):

- 43 percent indicated lack of familiarity --
 - 35 percent said they had never tried or used avocados
 - 7 percent said they didn't know how to prepare them
 - 3 percent said they didn't know what they are
 - 1 percent said they didn't know how to buy them

- 24 percent indicated they didn't buy because of taste or flavor --
 - 10 percent simply said they didn't like the taste
 - 8 percent complained of a flat taste, tastelessness
 - 3 percent said they weren't accustomed to the taste
 - 3 percent gave other taste reasons
- 20 percent said they or their families didn't like avocados
- 13 percent considered avocados too expensive
 - 9 percent said avocados were not available in their shops
 - 5 percent said avocados were fattening or otherwise unhealthful

Raisins

Use of Raisins.--The great majority of households in the United States -- 83 percent -- used raisins in the year preceding the survey, and most families used them frequently. Among the homemakers who used raisins in the past year:

- 18 percent used them more than once a week
- 19 percent used them about once a week
- 34 percent used them 1 to 3 times a month
- 29 percent used them less than once a month

There was little regional difference in the proportions who said they used raisins, the range being from 79 percent in the Northeast to 85 percent in the North Central States. Most frequent use was indicated in the West, where 80 percent of users said they served raisins at least once a month and only 20 percent said less than once a month (tables 7 and 8).

Attitudes toward Raisins.--Homemakers gave many reasons for liking to use raisins, but the most important ones add up to, "They're good for you (particularly because they contain iron)," and, "They taste good."

In answer to the question, "Would you tell me what you like about using raisins?" homemakers who had used raisins in the past year gave mainly the following answers:

- 64 percent gave health reasons --
 - 41 percent said they contain iron
 - 9 percent said they're good for the blood
 - 8 percent said they have vitamins, minerals
 - 8 percent said they're good for the children
 - 7 percent said simply they are healthful
 - 6 percent said they are a natural laxative
 - 4 percent said they are an energy food
- 56 percent spoke of the taste or flavor --
 - 26 percent said they add flavor to other foods
 - 17 percent said they have a sweet taste
 - 14 percent said simply they liked the taste
 - 3 percent called them sweet but not too sweet
- 11 percent said raisins are a good candy substitute
- 9 percent said they were no trouble to prepare
- 8 percent said they mix well with other food
- 7 percent said the children liked them
- 6 percent said they are versatile, can be used many ways
- 5 percent liked them for snacks

The 17 percent of homemakers who did not use raisins in the past year gave, mainly nonspecific reasons such as, "We just don't like them," "My recipes don't call for raisins," or "We've no special need for them." Dislike of the taste or belief that raisins are not healthful were also advanced as reasons.

Here are the leading reasons homemakers gave for not having used raisins in the past year:

- 33 percent said they or their families did not like raisins
- 20 percent said they did little or no cooking requiring raisins
- 15 percent said they had no need or use for them
- 14 percent said either that they didn't like the taste or that the taste was too sweet
- 13 percent gave health reasons --
 - 3 percent said raisins upset the stomach, gave indigestion
 - 3 percent said they were bad for certain ailments
 - 2 percent said they were fattening
 - 2 percent said they were bad for teeth
 - 4 percent gave other health reasons

Dates

Use of Dates.--About 2 homemakers in 5 said they had not used dates in the year preceding the interview, and among those women who did use them, the majority reported infrequent use. Southern homemakers reported the smallest use of dates (tables 9, 10).

Among the 60 percent of homemakers who used dates in the past year:

- 9 percent said they served them once a week or more
- 25 percent served them 1 - 3 times a month
- 66 percent served them less than once a month

A little more than half the homemakers who used dates said they used them all year round, but to 45 percent dates were a seasonal -- mainly holiday and winter -- item. About 2 out of 3 of the seasonal users said that they thought dates were available all year round at the stores where they shopped.

Attitudes toward Dates.--Homemakers who used dates in the past year advanced many reasons for liking to use this fruit. Taste and health values were widely mentioned, and the use of dates in cooking and baking is reflected in the qualities housewives indicated that dates add to other foods.

Asked, "Would you tell me what you like about using dates?" date users gave the following answers, among others:

- 64 percent spoke of taste or flavor --
 - 29 percent spoke of sweet taste, natural sweetness
 - 18 percent simply said they liked the flavor
 - 17 percent said dates add flavor to other foods
 - 6 percent spoke of a distinctive flavor

23 percent gave health reasons --

- 8 percent said dates are nutritious, have food value
- 6 percent spoke of vitamins, minerals, calcium, iron
- 3 percent considered dates a laxative
- 2 percent said dates are an energy food
- 2 percent thought dates not too rich
- 2 percent said they are not fattening

16 percent said dates are a good candy substitute

12 percent considered them a special holiday or company treat

12 percent said dates keep other foods moist and fresh

10 percent said they add richness to other foods

10 percent said they add variety to the menu

9 percent said dates are easy to serve or prepare

7 percent said they used dates in certain recipes

7 percent said they or their families like dates

Lack of familiarity with dates and dislike of dates generally or of their taste were the major reasons given for not having used dates in the past year.

Reasons of nonusers included:

37 percent indicated lack of familiarity --

18 percent said they had never tried or used dates

14 percent said they had no use for them in their recipes

4 percent hadn't developed a taste for dates

3 percent said they didn't know what dates are

34 percent simply said they didn't care for them

30 percent gave taste reasons --

19 percent said dates were too sweet

11 percent said they didn't like the taste

4 percent said they were too rich

12 percent said dates were expensive

7 percent said dates were too sticky, gummy, or messy

6 percent thought dates unhealthful

Preferences for Types of Dates.--Among date users who expressed a color preference, dark dates were preferred over light by almost 2-to-1, but almost half had no preference:

36 percent said they preferred dark dates

20 percent said they preferred light

44 percent had no preference

On the subject of pits, opinion was much more clear-cut: 7 out of 10 users said they preferred pitted dates, 2 out of 10 dates with pits left in, and 1 out of 10 had no preference. This attitude appeared to translate into action, for 7 out of 10 date users said the last dates they had bought were pitted and 3 out of 10 had bought unpitted dates.

Imported Dates.--Only about a third of date consumers were aware that foreign-grown dates are sold in the United States. Asked: "As far as you know, are the dates sold in the United States grown in this country, in foreign countries, or both?" --

28 percent of date users said in this country
10 percent said in foreign countries
25 percent said both
37 percent said they did not know

The 25 percent who said both domestic and imported dates are sold here divided about evenly in estimating where most of them were grown:

10 percent said most dates sold here are grown in this country
8 percent said most are grown in foreign countries
7 percent did not know

Half the users did not know whether the dates they bought last were imported or not:

54 percent said they did not know where the dates were grown
35 percent said they were grown in the United States
11 percent said they were grown elsewhere than the United States

Food Components

Most homemakers said they had heard of vitamin C, vitamin A, and energy food, while relatively few said they had seen or heard anything about bioflavonoids or protopectins. Proportions saying each of these components are to be found in fresh fruit ranged from 7 percent for bioflavonoids to 82 percent for vitamin C (table 11).

Those homemakers who named fruits as a source for the various components associated vitamin C and bioflavonoids almost exclusively with citrus fruits, particularly oranges. In addition to citrus fruits, vitamin A and protopectins were associated especially with apples. In naming sources of energy, homemakers did not confine themselves to fresh fruits but named raisins next in importance to citrus, followed by bananas, apples, and dates.

Table 1.--Homemakers who said they had used certain citrus products during the past year: "At this time of year, about how often do you serve (each product used)?"

Product	Frequency of serving at this time of year					Cases
	More than once a week	Once a week	1-3 times a month	Less than once a month	Don't serve	
	<u>Per- cent</u>	<u>Per- cent</u>	<u>Per- cent</u>	<u>Per- cent</u>	<u>Per- cent</u>	<u>Num- ber</u>
Fresh fruit						
Oranges -----	68	11	13	6	2	2,414
Grapefruit -----	45	17	25	11	2	2,083
Lemons -----	27	16	26	13	18	2,278
Limes -----	4	4	13	20	59	623
Frozen concentrated juices						
Orange -----	48	11	19	13	9	1,652
Grapefruit -----	18	15	29	24	14	473
Lemon -----	6	8	18	20	48	748
Canned juices						
Orange -----	29	15	26	22	8	1,270
Grapefruit -----	22	16	30	26	6	1,079
Lemon -----	13	11	25	30	21	683
Ready-to-serve orange juice --	19	10	23	33	15	790
Frozen concentrated ades						
Orange -----	3	3	11	12	71	573
Lemon -----	5	4	9	8	74	1,020
Lime -----	1	2	7	8	82	432

Table 3.--Homemakers who said they did not use certain citrus products in the last year: Summary of percentage distribution of reasons for nonuse given by 10 percent or more

Reasons	Fresh fruit				Frozen concentrated juices				Canned juices				Ready-to-serve orange juice	Frozen concentrated ades		
	Oranges Per- cent	Grape- fruit Per- cent <u>1/</u>	Lemons Per- cent <u>1/</u>	Limes Per- cent	Orange Per- cent	Grape- fruit Per- cent	Lemon Per- cent <u>1/</u>	Orange Per- cent <u>1/</u>	Grape- fruit Per- cent	Lemon Per- cent	Orange Per- cent	Lemon Per- cent		Lime Per- cent <u>1/</u>		
Health reasons--have ailment, too acid for health, lacks vitamins, nutrients -----	33	19	20	--	15	10	--	18	15	--	--	--	--	--		
	23	12	20	--	14	--	14	--	--	--	--	--	--	--		
	20	12	15	--	19	10	10	--	--	--	18	10	11	--		
Convenience reasons--difficult to prepare, can't store -----																
Too expensive -----																
Taste reasons--too bitter, too sour; tastes of can, process- ing -----	--	44	19	26	16	32	16	58	54	29	17	19	17	24		
Availability reasons--not avail- able; preferred products are available -----	--	--	--	12	--	--	--	--	--	--	12	--	--	--		
Food habit reasons--never think of it; don't use it -----	--	--	13	33	16	16	21	--	--	17	23	27	24	30		
Just don't like it -----	--	18	11	13	--	--	--	--	12	--	--	--	--	10		
Not so good as fresh products ---	--	--	--	--	20	19	29	17	14	31	12	17	23	10		
Not so good as other (not fresh) product -----	10	--	11	--	--	--	--	14	--	--	--	10	--	--		
Number of cases -----	158	489	294	1,949	920	2,099	1,824	1,302	1,493	1,889	1,782	1,999	1,552	2,104		

1/ Percentages add to more than 100 because of multiple answers.

Table 4.--Homemakers who said home-squeezed orange juice is richest in vitamin content: "Thinking of the vitamin content of home-squeezed orange juice as 100 percent, what would you say is the vitamin content of canned orange juice? Of frozen orange juice?"

Percentage	Vitamin content of	
	Canned orange juice	Frozen orange juice
	<u>Percent</u>	<u>Percent</u>
10 percent or less -----	2	1
11 - 20 percent -----	1	1
21 - 30 percent -----	3	1
31 - 40 percent -----	2	1
41 - 50 percent -----	26	8
51 - 60 percent -----	5	3
61 - 70 percent -----	6	4
71 - 80 percent -----	25	24
81 - 90 percent -----	8	21
Over 90 percent -----	5	21
Not ascertained -----	17	15
Number of cases -----	2,186	
Median percentage -----	65	80

Table 5.--"Have you used or served avocados in your home in the last year?"

Region	Use of avocados			Cases
	Used	Did not use	Never heard of	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
United States total -----	25	62	13	2,572
Northeast -----	16	68	16	660
North Central -----	12	73	15	743
South -----	25	58	17	753
West -----	60	38	2	416

Table 6.--Homemakers who used avocados in the last year: "About how often have you served avocados in the last year?"

Region	Frequency of use				Cases
	More than once a week	Once a week	1-3 times a month	Less than once a month	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
United States total ---	10	10	31	49	633
Northeast -----	12	10	31	47	104
North Central -----	2	2	21	75	91
South -----	12	11	30	47	188
West -----	11	13	35	41	250

Table 7.--"Have you used or served raisins in your home in the last year?"

Region	Used	Did not use	Cases
	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
United States total -----	83	17	2,572
Northeast -----	79	21	660
North Central -----	85	15	743
South -----	84	16	753
West -----	81	19	416

Table 8.--Homemakers who used raisins in the last year: "About how often have you used or served raisins in the last year?"

Region	More than once a week	Once a week	1-3 times a month	Less than once a month	Cases
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
United States total ----	18	19	34	29	2,125
Northeast -----	19	19	32	30	523
North Central -----	15	19	37	29	633
South -----	17	18	33	32	632
West -----	24	24	32	20	337

Table 9.--"Have you used or served dates in your home in the last year?"

Region	Used	Did not use	Cases
	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
United States total -----	60	40	2,572
Northeast -----	63	37	660
North Central -----	66	34	743
South -----	45	55	753
West -----	69	31	416

Table 10.--Homemakers who used dates in the last year: "About how often have you used or served dates in the past year?"

Region	More than once a week	Once a week	1-3 times a month	Less than once a month	Cases
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
United States total ----	3	6	25	66	1,532
Northeast -----	4	10	24	62	417
North Central -----	4	4	25	67	490
South -----	2	3	19	76	338
West -----	3	9	30	58	287

Table 11.--(Show homemaker card with list of terms): "Here are some terms that are used about food. Which of these have you seen or heard anything about?" (For each term seen or heard of): "Which of these are found in fresh fruit?" (For each found in fresh fruit): "Which fresh fruit would you say is best for (name component)?"

Response	Component				
	Vitamin C	Vitamin A	Energy food	Bioflav-anoids	Proto-pectins
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Not seen or heard of -----	6	13	21	74	75
Seen or heard of -----	<u>94</u>	<u>87</u>	<u>79</u>	<u>26</u>	<u>25</u>
Not associated with fresh fruit	12	44	30	19	11
Associated with fresh fruit ----	<u>82</u>	<u>43</u>	<u>49</u>	<u>7</u>	<u>14</u>
Don't know which fruit -----	4	13	5	2	2
Name one or more fruits -----	<u>1/78</u>	<u>1/30</u>	<u>1/44</u>	<u>1/5</u>	<u>1/12</u>
Citrus (unspecified) -----	7	2	2	1	1
Oranges -----	64	14	15	3	2
Grapefruit -----	9	3	3	1	1
Lemons -----	4	2	1	1	2
Other citrus -----	<u>2/ *</u>	*	*	*	*
Apples -----	1	5	5	*	6
Avocados -----	*	1	1	*	*
Bananas -----	*	2	6	*	*
Dates -----	*	*	4	*	*
Grapes -----	*	*	1	*	1
Prunes -----	*	*	1	*	*
Raisins -----	*	1	13	*	*
Tomatoes -----	1	1	*	*	*
All others -----	*	2	3	*	1
Number of cases -----	2,572				

1/ Percentages add to more than the total naming fruits because of multiple answers.

2/ Asterisk indicates less than 1 percent.

